

**WHAT IS CLAIMED IS:**

1. An apparatus for a vehicle for protection of a colliding object comprising:
  - 5 one of a collision prediction module which delivers a precautionary signal when the collision prediction module predicts a collision of the vehicle with the object and an collision detection module which delivers a collision signal when the collision detection module detects the collision;
  - 10 an air bag which deploys on either a hood of the vehicle or an outside of a windshield thereof when the collision is either predicted by the collision prediction module or detected by the collision detection module;
  - 15 a camera for taking a forward image of the vehicle; and
  - a monitor disposed in a cabin of the vehicle,  
wherein the monitor displays the image taken by the camera when the monitor receives one of the precautionary signal and the collision signal.

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2. An apparatus according to claim 1 wherein the monitor comprises a head-up display unit which projects the image taken by the camera on the windshield.
- 20 3. An apparatus according to claim 1 wherein the collision prediction module employs image processing.
4. An apparatus according to claim 3 wherein one of an object sensor and an infrared camera is used for the image processing.
- 25 5. An apparatus according to claim1 wherein the collision detection module

comprises one of an impulsive force detector and an accelerometer.

6. An apparatus according to claim 1 wherein the camera comprises an infrared camera.

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7. An apparatus for a vehicle for protection of a colliding object comprising:

one of a collision prediction module which delivers a precautionary signal when the collision prediction module predicts a collision of the vehicle with the object and an collision detection module which delivers a collision signal when the collision detection module detects the collision;

an air bag which deploys on an outside of a windshield of the vehicle when the collision is either predicted by the collision prediction module or detected by the collision detection module;

a hood skin which the deployed air bag elevates so that the hood skin can perform the protection of the colliding object in collaboration with the air bag;

a camera for taking a forward image of the vehicle; and

a monitor disposed in a cabin of the vehicle,

wherein the monitor displays the image taken by the camera when the monitor receives one of the precautionary signal and the collision signal.